Trying 81400...Open

PLEASE ENTER HOST PORT ID: INVALID PORT POOL ID ENTERED PLEASE REENTER HOST PORT ID:x

LOGINID: d211dpm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, 4, OR ?):3

Welcome to MESSENGER (APS Text) at USPTO

The USPTO production files are current through: JAN 13 1998 for U.S. Patent Text Data. JAN 13 1998 for U.S. Current Classification data.

JAN 13 1998 for U.S. Patent Image Data.

* PLEASE USE 305-9000 FOR NEW TELEPHONE NUMBER *

* More U.S. patent data is now available on APS. The new * USOCR file contains patents issued in 1970, plus some * patents that were missing from the USPAT file. See the * Patents News Folder under the Public Folders in e-mail for * more information on using the new file. Thank you.

DISCLAIMER:

Neither the United States Government, nor any agency thereof, nor any of their contractors, subcontractors or employees make any warranty, expressed or implied, including any warranty of marketability of fitness for a particular purpose; nor assumes any legal liability or responsibility for any party's use, or the results of such, of the data.

Help Desk --> 703-305-9000

The Help Desk is staffed for APS support 7 days/week. 6:30am - 9:00pm Monday through Friday: Saturday, Sunday, Holidays: 8:30am - 5:00 pm

The Help Desk staff at this number will handle all APS related questions.

>>>>>> NEW SUNDAY HOURS]]] <<<<<<

The APS is available:

6:30am - 9:00pm Monday through Friday 7:30am - 5:00pm Saturday, Sunday, Holidays

APS is unavailable Thanksqiving Day, Christmas Day, and New Year's Day.

FILE 'USPAT' ENTERED AT 09:38:41 ON 15 JAN 1998

```
WELCOME
                                  T O
                                        THE
            U.S.
                   PATENT
                                  TEXT
                                            FILE
=> s 347/clas
         13948 347/CLAS
L1
=> s l1 and (multi(w)channel? or multichannel?)(2a)array?
        209915 MULTI
        368696 CHANNEL?
          5549 MULTICHANNEL?
        177692 ARRAY?
           180 (MULTI(W)CHANNEL? OR MULTICHANNEL?)(2A)ARRAY?
            21 L1 AND (MULTI(W)CHANNEL? OR MULTICHANNEL?) (2A) ARRAY?
L2
=> s 12 and piezo?(10a)(polar? or poled)(10a)(perpendicular? or normal?)
         33766 PIEZO?
        214832 POLAR?
          8521 POLED
        355061 PERPENDICULAR?
        973792 NORMAL?
           215 PIEZO? (10A) (POLAR? OR POLED) (10A) (PERPENDICULAR? OR NORMAL?
١
             7 L2 AND PIEZO? (10A) (POLAR? OR POLED) (10A) (PERPENDICULAR? OR
L3
NOR
               MAL?)
=> s 13 and shear
         73288 SHEAR
L4
             7 L3 AND SHEAR
=> s 14 top(w)cover
MISSING OPERATOR 'L4 TOP'
=> s 14 and top(w)cover
        944867 TOP
        452610 COVER
         11613 TOP(W)COVER
             0 L4 AND TOP(W)COVER
L_5
=> d 13 1-7
1. 5,463,414, Oct. 31, 1995, Multi-channel array droplet
deposition apparatus; Stephen Temple, et al., 347/68, 50, 69
: IMAGE AVAILABLE:

    5,361,084, Nov. 1, 1994, Method of multi-tone printing; Anthony D.

Paton, et al., 347/15, 43, 69 : IMAGE AVAILABLE:
3. 5,028,936, Jul. 2, 1991, Pulsed droplet deposition apparatus using
unpoled crystalline shear mode actuator; W. Scott Bartky, et al.,
347/69; 310/333, 360, 362; 347/40 :IMAGE AVAILABLE:
4. 5,016,028, May 14, 1991, High density multi-channel
array, electrically pulsed droplet deposition apparatus; Stephen
```

5. 4,992,808, Feb. 12, 1991, Multi-channel array, pulsed droplet deposition apparatus; W. Scott Bartky, et al., 347/69, 40

Temple, 347/69; 310/333; 347/40 : IMAGE AVAILABLE:

: IMAGE AVAILABLE:

- 6. 4,887,100, Dec. 12, 1989, Droplet deposition apparatus; A. John Michaelis, et al., **347/69**; 310/333; **347/40**: IMAGE AVAILABLE:
- 7. 4,879,568, Nov. 7, 1989, Droplet deposition apparatus; W. Scott

Bartky, et al., **347/69**; 310/333 :IMAGE AVAILABLE:

=> s 12 and top(2a) (sheet or plate or cover)
944867 TOP
345982 SHEET
632714 PLATE
452610 COVER

67967 TOP(2A) (SHEET OR PLATE OR COVER)

8 L2 AND TOP(2A) (SHEET OR PLATE OR COVER)

=> d 1-8
INVALID COMMAND SYNTAX
INVALID PORT POOL ID ENTERED
PLEASE REENTER HOST PORT ID:d 1-98

INVALID COMMAND SYNTAX

L6

- 1. 5,463,414, Oct. 31, 1995, Multi-channel array droplet deposition apparatus; Stephen Temple, et al., 347/68, 50, 69: IMAGE AVAILABLE:
- 2. 5,361,084, Nov. 1, 1994, Method of multi-tone printing; Anthony D. Paton, et al., **347/15**, **43**, **69**: IMAGE AVAILABLE:
- 3. 5,028,936, Jul. 2, 1991, Pulsed droplet deposition apparatus using unpoled crystalline shear mode actuator; W. Scott Bartky, et al., 347/69; 310/333, 360, 362; 347/40 :IMAGE AVAILABLE:
- 4. 5,016,028, May 14, 1991, High density multi-channel array, electrically pulsed droplet deposition apparatus; Stephen Temple, 347/69; 310/333; 347/40 :IMAGE AVAILABLE:
- 5. 4,992,808, Feb. 12, 1991, Multi-channel array, pulsed droplet deposition apparatus; W. Scott Bartky, et al., 347/69, 40:IMAGE AVAILABLE:
- 6. 4,887,100, Dec. 12, 1989, Droplet deposition apparatus; A. John Michaelis, et al., **347/69**; 310/333; **347/40**: IMAGE AVAILABLE:
- 7. 4,879,568, Nov. 7, 1989, Droplet deposition apparatus; W. Scott Bartky, et al., **347/69**; 310/333 :IMAGE AVAILABLE: